

CHAPTER III

Drag chain cables

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BiTflex[®] 500

Highly flexible, PVC sheathed cables for drag chains, rated 300/500V



BITNER BiTflex 500[®] 300/500V CE

Technical data:

Highly flexible control cable with number coded conductors, PVC insulation and outer sheath

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -5°C to 80°C

Installation temperature: -5°C to 50°C

Operating voltage: $U_0/U=300/500V$

Test voltage (50Hz): 3000V

Min. bending radius:

Flexible connections: $7,5 \times \varnothing$

Fixed installation: $4 \times \varnothing$

Construction:

Conductors: highly flexible, bare, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation: special PVC

Core identification: black, number coded conductors with one green/yellow in outer layer

Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Outer sheath: special PVC, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant acc to EN 60332-1

Outer sheath colour: grey

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain.



industrial application



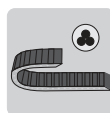
internal application



PN-EN 60332-1



high flexibility



drag chains

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
S55000	2x0,5	5,1	37	9,6
S55001	3G0,5	5,4	46	14,4
S55002	4G0,5	5,8	55	19,2
S55003	5G0,5	6,4	63	24,0
S55004	7G0,5	7,4	84	33,6
S55005	7x0,5	7,4	84	33,6
S55006	10G0,5	9,1	125	48,0
S55007	12G0,5	9,4	138	57,6
S55008	14G0,5	9,8	156	67,2
S55009	16G0,5	10,3	172	76,8
S55010	18G0,5	11,1	193	86,4
S55011	20G0,5	11,6	214	96,0
S55012	24G0,5	13,2	251	115,2
S55013	30G0,5	13,7	307	144,0
S55014	37G0,5	15,2	363	177,6
S55015	2x0,75	5,5	46	14,4
S55016	3G0,75	5,8	58	21,6
S55017	4G0,75	6,4	67	28,8
S55018	5G0,75	7,1	89	36,0
S55019	7G0,75	8,2	112	50,4
S55020	7x0,75	8,2	112	50,4
S55021	10G0,75	10,2	163	72,0
S55022	12G0,75	10,4	176	86,4
S55023	14G0,75	10,9	197	100,8
S55024	16G0,75	11,6	226	115,2
S55025	18G0,75	12,3	240	129,6
S55026	20G0,75	12,9	276	144,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
S55027	24G0,75	14,8	331	172,8
S55028	2x1,0	5,8	60	19,2
S55029	3G1,0	6,2	69	28,8
S55030	4G1,0	6,9	88	38,4
S55031	5G1,0	7,5	104	48,0
S55032	7G1,0	8,6	129	67,2
S55033	7x1,0	8,6	129	67,2
S55034	10G1,0	10,8	184	96,0
S55035	12G1,0	11,0	208	115,2
S55036	14G1,0	11,7	239	134,4
S55037	16G1,0	12,4	268	153,6
S55038	18G1,0	13,2	301	172,8
S55039	20G1,0	13,8	328	192,0
S55040	24G1,0	15,8	392	230,4
S55041	2x1,5	6,5	78	28,8
S55042	3G1,5	7,1	98	43,2
S55043	4G1,5	7,6	119	57,6
S55044	5G1,5	8,5	146	72,0
S55045	7G1,5	10,1	182	100,8
S55046	10G1,5	12,1	265	144,0
S55047	12G1,5	12,6	312	172,8
S55048	2x2,5	7,8	112	48,0
S55049	3G2,5	8,5	138	72,0
S55050	4G2,5	9,5	178	96,0
S55051	5G2,5	10,4	216	120,0
S55052	7G2,5	12,2	271	168,0
S55053	10G2,5	15,2	392	240,0
S55054	12G2,5	15,4	452	288,0

Cable Factory BITNER reserve the right to modify specifications without prior notification

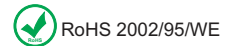
G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: On customer's request other cross sections or number of cores can be produced

BiTflex[®] 500 CY

Highly flexible, screened, PVC sheathed cables for drag chains, rated 300/500V



Technical data:

Highly flexible control cable with number coded conductors, PVC insulation and outer sheath, screened.

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -5°C to 80°C

Installation temperature: -5°C to 50°C

Operating voltage: $U_0/U=300/500V$

Test voltage (50Hz): 3000V

Min. bending radius:

Flexible connections: $7,5 \times \varnothing$

Fixed installation: $4 \times \varnothing$

Construction:

Conductors: highly flexible, bare, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation: special PVC

Core identification: black, number coded conductors with one green/yellow in outer layer

Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Inner sheath: special PVC

Screen: tinned copper wire braid, coverage $\geq 85\%$, special wrapping with separating tape beneath the screen, around the screen special reinforcing fleece tape.

Outer sheath: special PVC, oil resistant (cf. chemical resistance table), self-extinguishing and flame retardant acc to EN 60332-1

Outer sheath colour: grey

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment.



industrial application



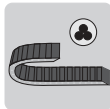
internal application



PN-EN 60332-1



high flexibility



drag chains



EMC

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
S55300	2x0,5	7,4	82,0	37,0
S55301	3G0,5	7,7	87,0	43,0
S55302	4G0,5	8,4	98,0	49,0
S55303	5G0,5	8,8	113,0	58,0
S55304	7G0,5	10,2	145,0	72,0
S55305	12G0,5	12,0	204,0	110,0
S55306	14G0,5	12,8	243,0	125,0
S55307	18G0,5	14,0	287,0	152,0
S55308	24G0,5	17,2	380,0	194,0
S55309	2x0,75	7,7	90,0	42,0
S55310	3G0,75	8,2	109,0	52,0
S55311	4G0,75	8,9	116,0	63,0
S55312	5G0,75	9,7	146,0	78,0
S55313	7G0,75	11,2	175,0	94,0
S55314	12G0,75	12,9	251,0	147,0
S55315	18G0,75	15,5	354,0	205,0
S55316	24G0,75	18,7	485,0	271,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
S55317	2x1,0	8,2	101,0	49,0
S55318	3G1,0	8,7	118,0	62,0
S55319	4G1,0	9,5	143,0	75,0
S55320	5G1,0	10,3	159,0	88,0
S55321	7G1,0	11,8	198,0	115,0
S55322	12G1,0	13,8	297,0	182,0
S55323	18G1,0	16,3	421,0	256,0
S55324	24G1,0	19,8	548,0	353,0
S55325	2x1,5	8,9	128,0	62,0
S55326	3G1,5	9,6	156,0	80,0
S55327	4G1,5	10,4	181,0	99,0
S55328	5G1,5	11,3	211,0	120,0
S55329	7G1,5	12,8	261,0	154,0
S55330	12G1,5	15,6	398,0	248,0
S55331	3G2,5	11,2	207,0	122,0
S55332	4G2,5	12,3	248,0	154,0
S55333	5G2,5	13,6	304,0	194,0
S55334	7G2,5	16,4	392,0	254,0

Cable Factory BITNER reserve the right to modify specifications without prior notification

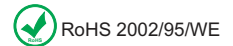
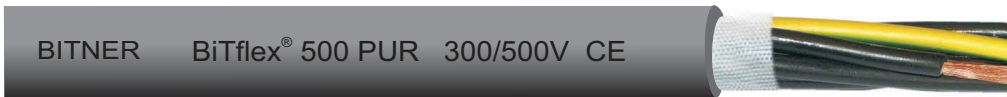
G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: On customer's request other cross sections or number of cores can be produced

BiTflex[®] 500 PUR

Highly flexible, PUR sheathed cables for drag chains, rated 300/500V



Technical data:

Highly flexible control cable with number coded conductors, PVC insulation and PUR sheath

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -5°C to 80°C

Installation temperature: -5°C to 50°C

Operating voltage: $U_0/U=300/500V$

Test voltage (50Hz): 3000V

Min. bending radius:

Flexible connections: $7,5 \times \varnothing$

Fixed installation: $4 \times \varnothing$



industrial application



internal application



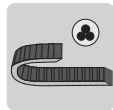
external application



PN-EN 60332-1



high flexibility



drag chains



oil resistant



chemical resistance



UV resistance

Construction:

Conductors: highly flexible, bare, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation: special PVC

Core identification: black, number coded conductors with one green/yellow in outer layer

Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Outer sheath: special PUR compound, resistant to abrasion, oil, chemicals, industrial coolants UV radiation, halogen-free

Outer sheath colour: grey, mat

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain.

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4600	2x0,5	5,0	33,0	9,6
SB4601	3G0,5	5,3	39,0	14,4
SB4602	3x0,5	5,3	39,0	14,4
SB4603	4G0,5	5,7	47,0	19,2
SB4604	4x0,5	5,7	47,0	19,2
SB4605	5G0,5	6,2	58,0	24,0
SB4606	5x0,5	6,2	58,0	24,0
SB4607	6G0,5	7,9	91,0	28,8
SB4608	7G0,5	7,9	94,0	33,6
SB4609	7x0,5	7,9	94,0	33,6
SB4610	8G0,5	8,6	109,0	38,4
SB4611	10G0,5	10,0	137,0	48,0
SB4612	12G0,5	10,3	151,0	57,6
SB4613	12x0,5	10,3	151,0	57,6
SB4614	14G0,5	10,7	168,0	67,2
SB4615	14x0,5	10,7	168,0	67,2
SB4616	16G0,5	11,4	191,0	76,8
SB4617	18G0,5	12,0	210,0	86,4
SB4618	19G0,5	12,0	214,0	91,2
SB4619	21G0,5	12,5	234,0	100,8
SB4620	2x0,75	5,4	40,0	14,4
SB4621	3G0,75	5,7	49,0	21,6
SB4622	3x0,75	5,7	49,0	21,6
SB4623	4G0,75	6,2	59,0	28,8
SB4624	4x0,75	6,2	59,0	28,8
SB4625	5G0,75	7,0	76,0	36,0
SB4626	5x0,75	7,0	76,0	36,0
SB4627	6G0,75	8,5	112,0	43,2
SB4628	7G0,75	8,5	116,0	50,4
SB4629	7x0,75	8,5	116,0	50,4
SB4630	8G0,75	9,6	141,0	57,6
SB4631	10G0,75	10,8	169,0	72,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4632	12G0,75	11,3	192,0	86,4
SB4633	12x0,75	11,3	192,0	86,4
SB4634	14G0,75	11,8	214,0	100,8
SB4635	14x0,75	11,8	214,0	100,8
SB4636	16G0,75	12,4	239,0	115,2
SB4637	18G0,75	13,0	264,0	129,6
SB4638	19G0,75	13,0	268,0	136,8
SB4639	21G0,75	13,7	299,0	151,2
SB4640	2x1,0	5,7	46,0	19,2
SB4641	3G1,0	6,0	57,0	28,8
SB4642	3x1,0	6,0	57,0	28,8
SB4643	4G1,0	6,8	73,0	38,4
SB4644	4x1,0	6,8	73,0	38,4
SB4645	5G1,0	7,4	89,0	48,0
SB4646	5x1,0	7,4	89,0	48,0
SB4647	6G1,0	9,3	139,0	57,6
SB4648	7G1,0	9,3	143,0	67,2
SB4649	7x1,0	9,3	143,0	67,2
SB4650	8G1,0	10,1	165,0	76,8
SB4651	10G1,0	11,6	202,0	96,0
SB4652	12G1,0	11,9	225,0	115,2
SB4653	12x1,0	11,9	225,0	115,2
SB4654	14G1,0	12,4	251,0	134,4
SB4655	14x1,0	12,4	251,0	134,4
SB4656	16G1,0	13,1	282,0	153,6
SB4657	18G1,0	13,9	319,0	172,8
SB4658	19G1,0	13,9	324,0	182,4
SB4659	21G1,0	14,5	354,0	201,6
SB4660	2x1,5	6,4	61,0	28,8
SB4661	3G1,5	7,0	80,0	43,2
SB4662	3x1,5	7,0	80,0	43,2
SB4663	4G1,5	7,6	99,0	57,6

BiTflex[®] 500 PUR

Highly flexible, PUR sheathed cables for drag chains, rated 300/500V

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4664	4x1,5	7,6	99,0	57,6
SB4665	5G1,5	8,3	121,0	72,0
SB4666	5x1,5	8,3	121,0	72,0
SB4667	6G1,5	10,4	181,0	86,4
SB4668	7G1,5	10,4	189,0	100,8
SB4669	7x1,5	10,4	189,0	100,8
SB4670	8G1,5	11,5	223,0	115,2
SB4671	10G1,5	13,0	268,0	144,0
SB4672	12G1,5	13,6	307,0	172,8
SB4673	12x1,5	13,6	307,0	172,8
SB4674	2x2,5	7,7	93,0	48,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4675	3G2,5	8,2	118,0	72,0
SB4676	3x2,5	8,2	118,0	72,0
SB4677	4G2,5	9,4	154,0	96,0
SB4678	4x2,5	9,4	154,0	96,0
SB4679	5G2,5	10,2	189,0	120,0
SB4680	5x2,5	10,2	189,0	120,0
SB4681	6G2,5	12,2	267,0	144,0
SB4682	7G2,5	12,2	281,0	168,0
SB4683	7x2,5	12,2	281,0	168,0
SB4684	8G2,5	13,6	331,0	192,0
SB4685	10G2,5	15,4	399,0	24,0
SB4686	12G2,5	16,3	464,0	24,0

Cable Factory BITNER reserve the right to modify specifications without prior notification

G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: On customer's request other cross sections or number of cores can be produced

BiTflex® 500 CPUR

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500V



Technical data:

Highly flexible control cable with number coded conductors, PVC insulation and PUR sheath, screened.

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -5°C to 80°C

Installation temperature: -5°C to 50°C

Operating voltage: $U_0/U=300/500V$

Test voltage (50Hz): 3000V

Min. bending radius:

Flexible connections: $7,5 \times \varnothing$

Fixed installation: $4 \times \varnothing$

Construction:

Conductors: highly flexible, bare, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation: special PVC

Core identification: black, number coded conductors with one green/yellow in outer layer

Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Inner sheath: special PVC

Screen: tinned copper wire braid, coverage $\geq 85\%$, special wrapping with separating tape beneath the screen, around the screen special reinforcing fleece tape.

Outer sheath: special PUR compound, resistant to abrasion, oil, chemicals, industrial coolants UV radiation

Outer sheath colour: grey, mat

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 5 million bending cycles in a drag chain. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment.



industrial application



internal application



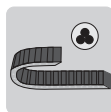
external application



PN-EN 60332-1



high flexibility



drag chains



EMC



oil resistant



chemical resistance



UV resistance

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4700	2x0,5	7,1	78,0	36,1
SB4701	3G0,5	7,4	86,0	42,0
SB4702	4G0,5	7,8	97,0	49,0
SB4703	5G0,5	8,3	111,0	57,3
SB4704	6G0,5	9,3	132,0	65,9
SB4705	7G0,5	9,3	136,0	71,7
SB4706	8G0,5	10,0	154,0	80,7
SB4707	10G0,5	11,0	180,0	96,6
SB4708	12G0,5	11,5	200,0	109,4
SB4709	14G0,5	11,9	218,0	122,7
SB4710	16G0,5	12,4	241,0	137,5
SB4711	18G0,5	13,0	262,0	151,3
SB4712	19G0,5	13,0	265,0	157,0
SB4713	21G0,5	13,7	293,0	171,0
SB4714	24G0,5	14,9	330,0	193,8
SB4715	2x0,75	7,5	88,0	41,6
SB4716	3G0,75	7,8	98,0	51,3
SB4717	4G0,75	8,3	113,0	62,3
SB4718	5G0,75	9,3	138,0	73,6
SB4719	6G0,75	9,9	157,0	84,9
SB4720	7G0,75	9,9	161,0	93,3
SB4721	8G0,75	10,6	183,0	106,2
SB4722	10G0,75	12,0	220,0	127,0
SB4723	12G0,75	12,3	241,0	146,5
SB4724	14G0,75	12,8	264,0	164,8
SB4725	16G0,75	13,6	298,0	184,7

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4726	18G0,75	14,2	326,0	204,1
SB4727	19G0,75	14,2	330,0	212,5
SB4728	21G0,75	14,7	358,0	231,7
SB4729	24G0,75	16,5	417,0	263,5
SB4730	2x1,0	7,8	97,0	48,2
SB4731	3G1,0	8,1	111,0	61,8
SB4732	4G1,0	9,1	135,0	74,9
SB4733	5G1,0	9,7	156,0	88,9
SB4734	6G1,0	10,3	178,0	102,9
SB4735	7G1,0	10,3	183,0	114,0
SB4736	8G1,0	11,3	212,0	128,6
SB4737	10G1,0	12,6	252,0	157,1
SB4738	12G1,0	12,9	276,0	180,8
SB4739	14G1,0	13,6	310,0	205,5
SB4740	16G1,0	14,3	344,0	231,0
SB4741	18G1,0	14,9	379,0	256,0
SB4742	19G1,0	14,9	383,0	267,1
SB4743	21G1,0	15,9	430,0	292,5
SB4744	24G1,0	17,4	485,0	332,4
SB4745	2x1,5	8,5	119,0	61,6
SB4746	3G1,5	9,3	144,0	79,6
SB4747	4G1,5	9,9	168,0	98,5
SB4748	5G1,5	10,6	197,0	119,1
SB4749	6G1,5	11,6	230,0	137,3
SB4750	7G1,5	11,6	238,0	153,4
SB4751	8G1,5	12,5	273,0	174,1

BiTflex[®] 500 CPUR

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500V

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4752	10G1,5	14,2	330,0	213,0
SB4753	12G1,5	14,6	365,0	247,3
SB4754	2G2,5	10,0	167,0	89,9
SB4755	3G2,5	10,5	196,0	121,4
SB4756	4G2,5	11,5	234,0	150,8

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB4757	5G2,5	12,3	276,0	183,3
SB4758	6G2,5	13,2	320,0	214,3
SB4759	7G2,5	13,2	333,0	241,9
SB4760	8G2,5	14,6	389,0	275,3
SB4761	10G2,5	16,8	479,0	338,8
SB4762	12G2,5	17,3	534,0	396,3

Cable Factory BITNER reserve the right to modify specifications without prior notification

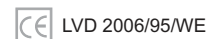
G - cables with green-yellow conductor

x - cables without green-yellow conductor

Note: On customer's request other cross sections or number of cores can be produced

BiTflex[®] 530 PUR

Highly flexible, PUR sheathed cables for drag chains, rated 300/500V



Technical data:

Highly flexible control cable with number coded conductors, TPE insulation and PUR sheath

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -30°C to 80°C

Installation temperature: -5°C to 50°C

Operating voltage: $U_0/U=300/500V$

Test voltage (50Hz): 3000V

Min. bending radius:

Flexible connections: $7,5 \times \varnothing$

Fixed installation: $4 \times \varnothing$



industrial application



internal application



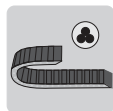
external application



PN-EN 60332-1



high flexibility



drag chains



oil resistant



chemical resistance



mechanical resistance



halogen free EN 50267



low smoke emission EN 61034



UV resistance

Construction:

Conductors: highly flexible, bare, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation: special halogen-free TPE-E or PP

Core identification: black, number coded conductors with one green/yellow in outer layer

Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Outer sheath: special PUR compound, resistant to abrasion, oil, chemicals, industrial coolants UV radiation, halogen-free

Outer sheath colour: grey, mat

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 10 million bending cycles in a drag chain.

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB3960	2x0,5	5,0	35	9,6
SB3961	3G0,5	5,3	40	14,2
SB3962	4G0,5	5,7	43	19,0
SB3963	5G0,5	6,3	55	24,0
SB3964	6G0,5	7,1	65	28,0
SB3965	7G0,5	7,3	72	35,0
SB3966	12G0,5	8,7	110	56,0
SB3967	18G0,5	10,4	155	86,0
SB3968	20G0,5	11,5	180	96,0
SB3969	25G0,5	12,7	210	120,0
SB3970	30G0,5	13,6	250	140,0
SB3971	36G0,5	14,2	280	172,0
SB3972	2x0,75	5,5	40	14,0
SB3973	3G0,75	5,7	48	21,8
SB3974	4G0,75	6,4	56	29,0
SB3975	5G0,75	7,0	70	36,0
SB3976	7G0,75	8,3	95	50,0
SB3977	12G0,75	10,0	145	86,0
SB3978	18G0,75	11,9	210	130,0
SB3979	25G0,75	14,7	300	180,0
SB3980	36G0,75	16,2	400	259,0
SB3981	2 x1,0	5,9	48	19,2
SB3982	3G1,0	6,3	58	29,0
SB3983	4G1,0	6,9	70	38,0

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB3984	5G1,0	7,5	85	48,0
SB3985	7G1,0	9,0	120	67,0
SB3986	12G1,0	10,8	180	115,0
SB3987	18G1,0	13,0	260	173,0
SB3988	25G1,0	16,0	360	240,0
SB3989	30G1,0	17,0	450	285,0
SB3990	36G1,0	17,8	510	346,0
SB3991	2x1,5	6,6	60	28,8
SB3992	3G1,5	7,0	78	43,0
SB3993	4G1,5	7,7	100	58,0
SB3994	5G1,5	8,5	120	72,0
SB3995	7G1,5	10,2	170	101,0
SB3996	12G1,5	12,3	250	173,0
SB3997	18G1,5	14,7	400	259,0
SB3998	25G1,5	18,0	540	360,0
SB3999	36G1,5	20,0	730	518,0
SB4000	3G2,5	8,7	120	72,0
SB4001	4G2,5	9,6	150	96,0
SB4002	5G2,5	10,7	190	120,0
SB4003	7G2,5	12,9	250	168,0
SB4004	12G2,5	15,9	450	288,0
SB4005	18G2,5	18,8	660	432,0
SB4006	25G2,5	23,1	890	600,0

Cable Factory BITNER reserve the right to modify specifications without prior notification


G - cables with green-yellow conductor
x - cables without green-yellow conductor

Note: On customer's request other cross sections or number of cores can be produced

BiTflex[®] 530 CPUR

Highly flexible, screened, PUR sheathed cables for drag chains, rated 300/500V

BITNER BiTflex[®] 530 CPUR 300/500V CE

 RoHS 2002/95/WE

 LVD 2006/95/WE

Technical data:

Highly flexible control cable with number coded conductors, TPE insulation and PUR sheath, screened.

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -30°C to 80°C

Installation temperature: -5°C to 50°C

Operating voltage: U₀/U=300/500V

Test voltage (50Hz): 3000V

Min. bending radius:

Flexible connections: 7,5 x Ø

Fixed installation: 4 x Ø

Construction:

Conductors: highly flexible, bare, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Insulation: special halogen-free TPE-E or PP

Core identification: black, number coded conductors with one green/yellow in outer layer

Core arrangement: cores twisted together in layers with short lay length, special wrapping of separating tape between each layer

Inner sheath: special halogen-free TPE

Screen: tinned copper wire braid, coverage ≥85%, special wrapping with separating tape beneath the screen, around the screen special reinforcing fleece tape.

Outer sheath: special PUR compound, resistant to abrasion, oil, chemicals, industrial coolants UV radiation, halogen-free

Outer sheath colour: grey, mat

Application:

Highly flexible power/control cables for installations in drag chains suitable for continuous movements and multiple bending. Designed and tested to withstand at least 10 million bending cycles in a drag chain. Common screen of tinned copper wire braid ensures very good protection against external electromagnetic field especially in industrial environment.



Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB3900	2x0,5	6,8	67	38
SB3901	3G0,5	7,0	80	43
SB3902	4G0,5	7,4	94	51
SB3903	5G0,5	8,1	107	60
SB3904	6G0,5	8,7	120	64
SB3905	7G0,5	9,3	132	68
SB3906	12G0,5	10,8	175	104
SB3907	18G0,5	12,6	230	143
SB3908	20G0,5	13,5	270	156
SB3909	25G0,5	15,2	310	200
SB3910	30G0,5	15,7	408	225
SB3911	36G0,5	16,7	460	260
SB3912	2x0,75	7,3	80	42
SB3913	3G0,75	7,7	100	48
SB3914	4G0,75	8,2	115	60
SB3915	5G0,75	8,8	130	68
SB3916	7G0,75	10,2	160	89
SB3917	12G0,75	12,0	230	132
SB3918	18G0,75	14,4	330	198
SB3919	25G0,75	17,2	450	269
SB3920	36G0,75	19,1	600	356
SB3921	2 x1,0	7,7	90	45
SB3922	3G1,0	8,1	110	56

Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
SB3923	4G1,0	8,7	125	69
SB3924	5G1,0	9,5	150	80
SB3925	7G1,0	11,0	200	110
SB3926	12G1,0	13,0	290	179
SB3927	18G1,0	15,6	420	252
SB3928	25G1,0	19,0	550	337
SB3929	30G1,0	19,6	630	381
SB3930	36G1,0	20,8	760	476
SB3931	2x1,5	8,3	120	59
SB3932	3G1,5	8,9	140	76
SB3933	4G1,5	9,6	160	90
SB3934	5G1,5	10,5	200	114
SB3935	7G1,5	12,2	250	145
SB3936	12G1,5	14,8	420	248
SB3937	18G1,5	17,2	560	356
SB3938	25G1,5	20,9	800	495
SB3939	36G1,5	23,2	1050	672
SB3940	3G2,5	10,7	200	112
SB3941	4G2,5	11,6	235	136
SB3942	5G2,5	12,7	290	184
SB3943	7G2,5	15,3	420	246
SB3944	12G2,5	18,5	630	382
SB3945	18G2,5	21,8	920	575
SB3946	25G2,5	26,3	1260	775

Cable Factory BITNER reserve the right to modify specifications without prior notification

G - cables with green-yellow conductor

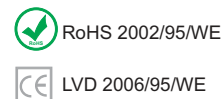
x - cables without green-yellow conductor

Note: On customer's request other cross sections or number of cores can be produced

BiTflex[®] 510 encoder

BiTflex[®] 510 servo

Connecting cable between servo controller and encoder/resolver for application in drag chains
 Connecting cable between servo controller and motor for application in drag chains



Technical data:

Special cables designed for use in cable chains, TPE insulated and polyurethane sheathed

Operating temperature:

Fixed installation: -40°C to 80°C
 Flexible connections: -30°C to 80°C

Nominal voltage:

Signal cables: 30V AC/DC

Power cable:

Power cores: 600/1000V
 Control cores: 24V AC/DC

Test voltage:

Signal cables: 500V
 Power cable: 4000V

Minimum bending radius:

Signal cable:
 Fixed: 4x D
 Dynamic: 8x D
 Power cable:
 Fixed: 4x D
 Dynamic: up to 16mm²: 7,5x D
 from 25mm² up to 50mm²: 10x D

Construction:

Conductors: highly flexible, annealed copper conductors, multi-stranded class 6 acc. to EN 60228

Signal cables: tinned

Power cables: bare

Insulation: special halogen-free TPE-E or PP

Screen: Tinned copper wire braid

Outer sheath: special PUR compound (11Y), resistant to oils and industrial coolants, low adhesive,

Outer sheath colour:

Signal cables: green

Power cables: orange

Application:

Highly flexible servomotor and feedback cables for connections between servo controller and encoder or motor. Intended especially for use in drag chains. Designed and tested to withstand at least 10 million continuous bending cycles. Cables are oil-, wear and tear resistant, halogen-free and cold flexible.



industrial application



internal application



PN-EN 60332-1



high flexibility



drag chains



oil resistant



chemical resistance



mechanical resistance



halogen free EN 50267



low smoke emission EN 61034



EMC

feedback/signal cables

n x mm ²	Core marking	Outer diameter [mm]	Approx. cable weight [kg/km]	Cu [kg/km]
(8x2x0,18)	DIN 47100	7,8	90	54
4x2x0,34+4x0,5	orange, red, violet. blue, brown, black, yellow, green, white-red, white-yellow, white-black, white-blue	9,2	125	80
3x(2x0,14)+2x(0,5)	green, yellow, grey, pink, blue, red, white, brown, DiN 47100	9,0	115	72
3x(2x0,14)+4x0,14+2x0,5	green, yellow. black, brown, blue, violet yellow, blue, grey, black-white, red, black green, yellow, black, brown, orange, red, white-yellow, white-black, blue, grey, brown-grey, brown-yellow, green-black, green-red, brown-red, brown-blue	9,0	110	75
3x(2x0,14)+4x0,14+2x0,5+4x0,22		9,7	145	93
4x2x0,18	DIN 47100	6,5	58	38
2x2x0,18	DIN 47100	5,2	38	27
12x0,22	white, brown, green, yellow, grey, blue, red, black, violet, orange, white-black, white-brown	7,2	69	42

BiTflex[®] 510 encoder

BiTflex[®] 510 servo

Connecting cable between servo controller and encoder/resolver for application in drag chains
Connecting cable between servo controller and motor for application in drag chains

motor cables

Cat. no.	n x mm ²	Core marking	Outer diameter [mm]	Approx. cable weight [kg/km]	Cu [kg/km]
SB5790	4G1,5	U1 V2 W3 green-yellow	9,3	155	92
SB5791	4G2,5		10,9	224	135
SB5792	4G4		12,0	302	208
SB5793	4G6		14,7	455	320
SB5794	4G10		17,8	660	495
SB5795	4G16		21,7	1025	777

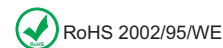
servo cables

Cat. no.	n x mm ²	Core marking	Outer diameter [mm]	Approx. cable weight [kg/km]	Cu [kg/km]
SB5800	4G1,5+(2x1,5)	Power cores: U1 V2 W3 green-yellow	11,8	235	150
SB5801	4G2,5+(2x1,5)		13,7	310	190
SB5802	4G4+(2x1,5)		14,9	387	265
SB5803	4G6+(2x1,5)	Control cores: BR1 BR2	17,0	533	368
SB5804	4G10+(2x1,5)		19,7	769	565
SB5805	4G16+(2x1,5)		23,2	1100	820
SB5806	4G25+(2x1,5)		26,8	1536	1210
SB5807	4G35+(2x1,5)		31,2	2044	1600
SB5808	4G50+(2x1,5)		34,1	2770	2252

Cable Factory BITNER reserve the right to modify specifications without prior notification
Note: On customer's request other cross sections or number of cores can be produced

BiT L2 BUS High Flex

LiO2YS(St)C11Y, Data transmission cables for the Profibus network



Technical data:

A symmetric cable with multi-stranded copper conductors, with foam polyethylene insulation and a thin external layer of solid polyethylene (O2YS), with common screen of aluminium backed polyester tape (St), and a second screen of tinned copper wire braid (C), polyurethane (11Y) outer sheath.

Wave impedance: 15

Conductor loop resistance (max.): 69,1

Insulation resistance (min.): 1G xkm

Capacitance: 35nF/km

Test voltage: 1,5 kV

Wave attenuation at a frequency of:

4 MHz = 2,5 dB/100m

16 MHz = 5,2 dB/100m

Operating temperature:

Fixed installation: -40°C to 80°C

Flexible connections: -30°C to 80°C

Installation temperature: -5°C to 50°C

Min. bending radius:

Fixed installation: 4xØ

Flexible connections: 7,5xØ

Construction:

Conductors: multi-stranded, bare copper conductors 1x2x0,64mm (AWG24/19)

Insulation: made of foamed polyethylene with a thin external layer of solid polyethylene

Conductor colors: red, green

Core arrangement: cores twisted together with two fillers

Screens: aluminium backed polyester tape and tinned copper wire braid

Sheath: special PUR with increased mechanical and chemical resistance

Sheath colour: purple

Application:

Cables designed for connecting very flexible applications and transmission of analogue and digital signals. Paired construction ensures good symmetry with respect to earth, while double screen protects against interference from external electromagnetic fields, which guarantees very good transmission quality. Cables may be used in dry and damp rooms, and are suitable especially for continuous bending in drag chains. Designed and tested to withstand minimum 5 million bending cycles.



industrial application



internal application



data transmission



high flexibility



EMC



oil resistant



chemical resistance



drag chains



mechanical resistance



hallogen free EN 50267



low smoke emission EN 61034



UV resistance

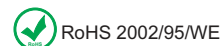
Cat. no.	n x mm ²	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
EB0018	1x2x0,64	8,1	73	26,3

Cable Factory BITNER reserve the right to modify specifications without prior notification

Note: On customer's request other cross sections or number of cores can be produced

BiT CAN-BUS Drag Chain

Data transmission cables for CAN-BUS network, designed for drag chain operations



Technical data:

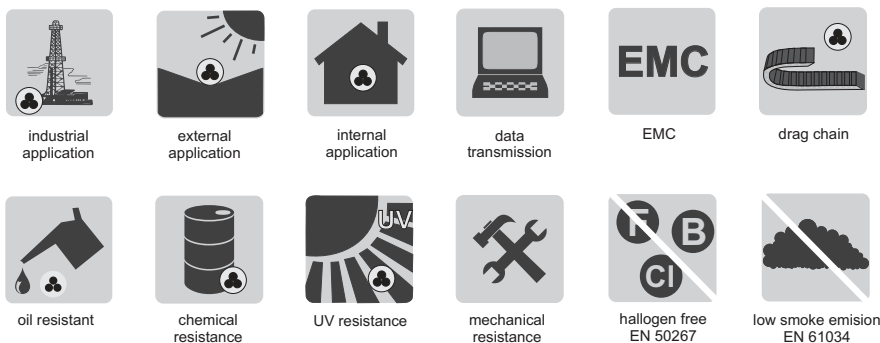
Wave impedance: 120
Conductor resistance (max.): 56
Insulation resistance: 5G xkm
Capacitance: 40 nF/km
Test voltage: 1,5 kV
Operating temperature: -40°C to 70°C
Installation temperature: -5°C to 50°C
Min. bending radius:
 Fixed installation 5xØ
 Flexible connection: 10xØ

Construction:

Conductors: very finely stranded bare copper wires (43x0,1mm)
Insulation: made of foamed polyethylene with a thin external layer of solid polyethylene
Conductor colours: white, brown
Core arrangement: cores twisted together
Wrapping: special fleece tape
Screen: tinned copper wire braid
Sheath: special PUR, with enhanced resistance to abrasion, chemicals, resistant to oil, industrial coolants and UV
Sheath colour: purple

Application:

BiT CAN-BUS Drag Chain Cable for data transmission in CAN (Control Area Network) is designed for continuous operation in drag chains withstanding at least 5M bending cycles within a chain. Cable suitable for operation both indoors and outdoors.



Cat. no.	nx2xmm	Outer diameter [mm]	Approximate cable weight [kg/km]	Cu [kg/km]
EB0050	1x2x0,34	7,0	60	30,0

Cable Factory BITNER reserve the right to modify specifications without prior notification
 Note: On customer's request other cross sections or number of cores can be produced